ABSTRACT OF THE DISCLOSURE

The present invention relates to an illuminant, etc., having a high response speed and a high luminous intensity. The illuminant comprises a substrate and a nitride semiconductor layer provided on one surface of the substrate. The nitride semiconductor layer emits fluorescence in response to incidence of electrons. At least part of the emitted fluorescence passes through the substrate, and then exits from the other surface of the substrate. Generation of the fluorescence is caused by incidence of electrons onto a quantum well structure of the nitride semiconductor layer and recombination of pairs of electrons and holes generated due to electron incidence, and the response speed of fluorescence generation is on the order of nanoseconds or less. Also, the luminous intensity of the fluorescence becomes equivalent to that of a conventional P47 fluorescent substance. Namely, the illuminant has a response speed and a luminous intensity that are sufficient for adaptation to scanning electron microscopes and mass spectroscopes.